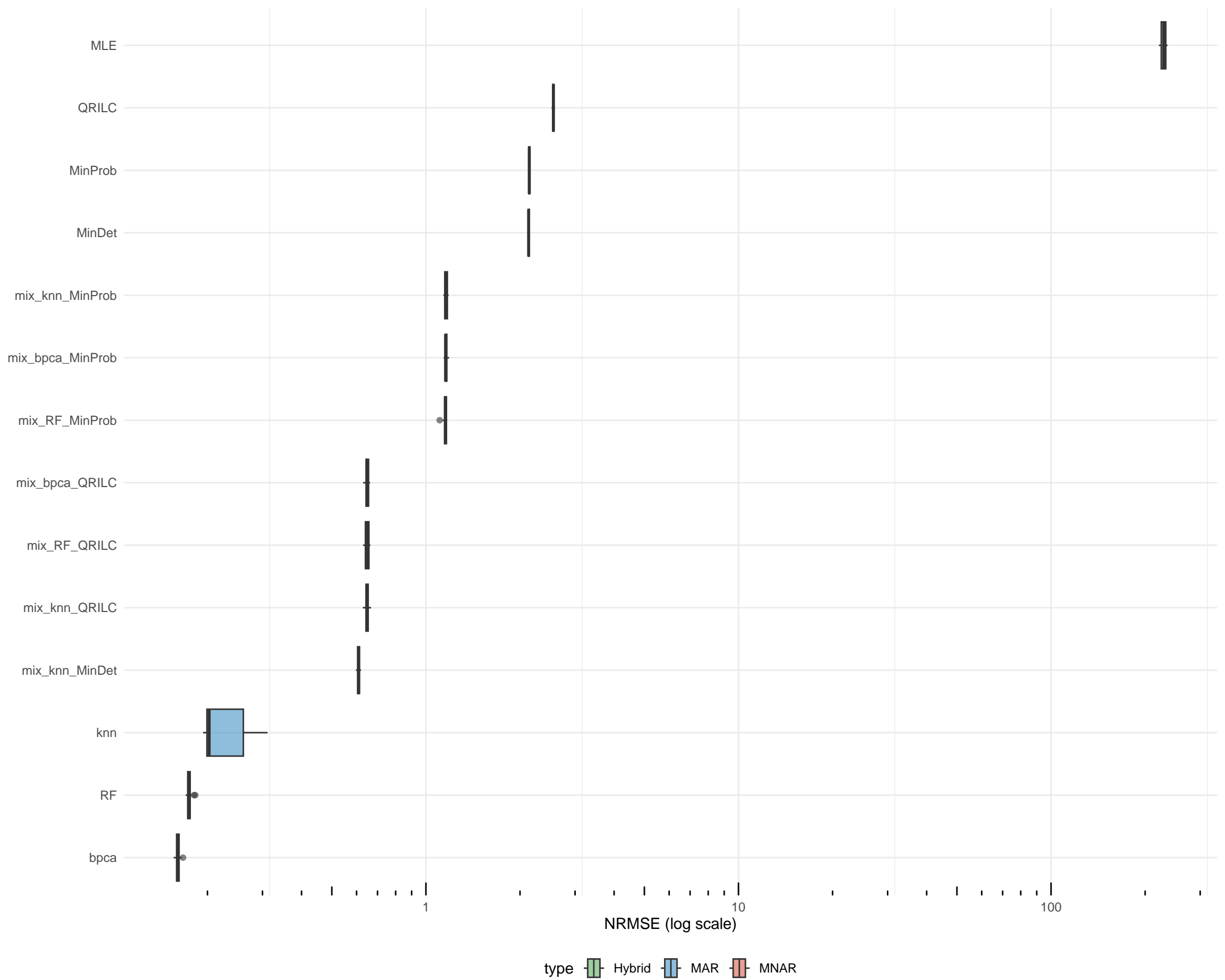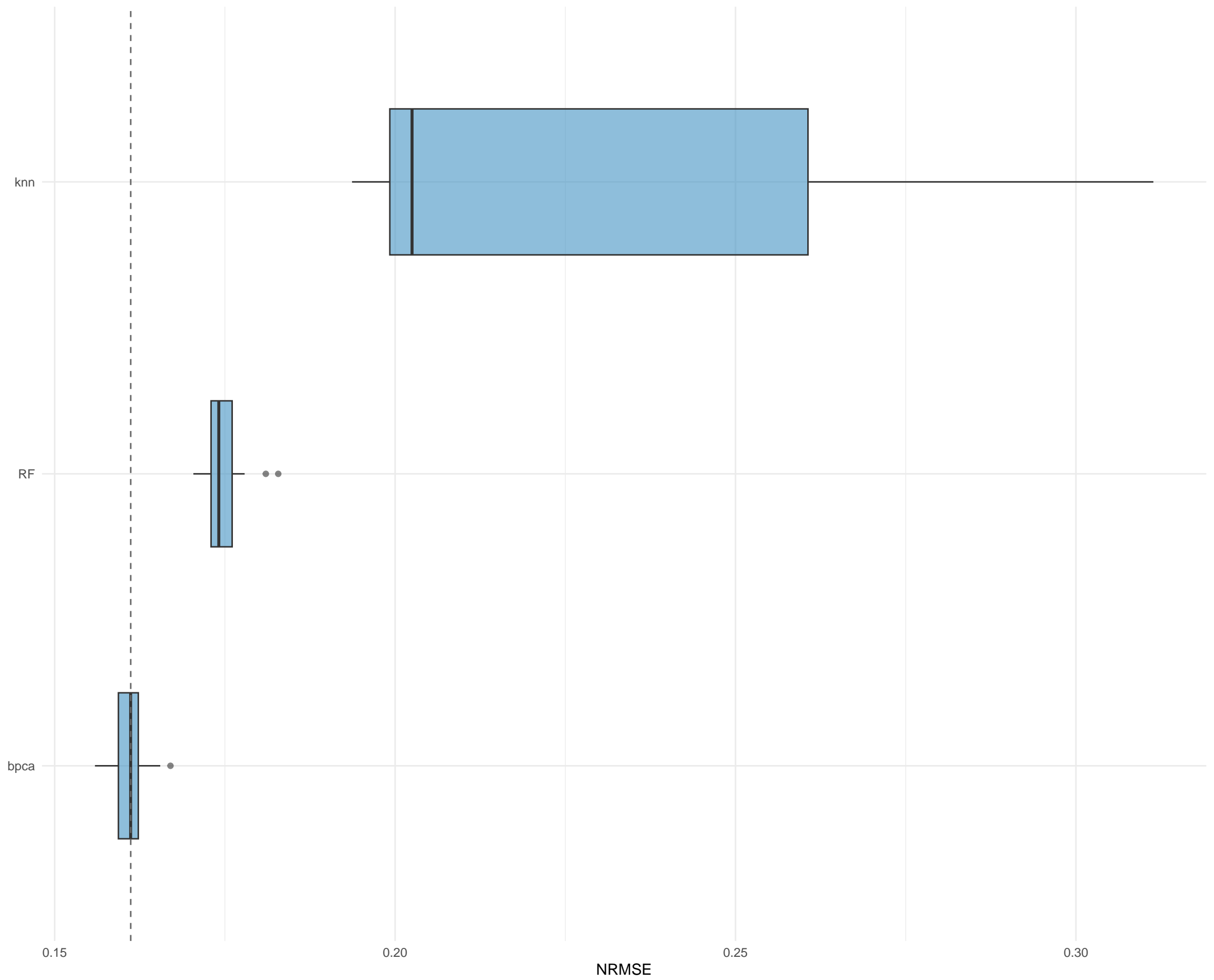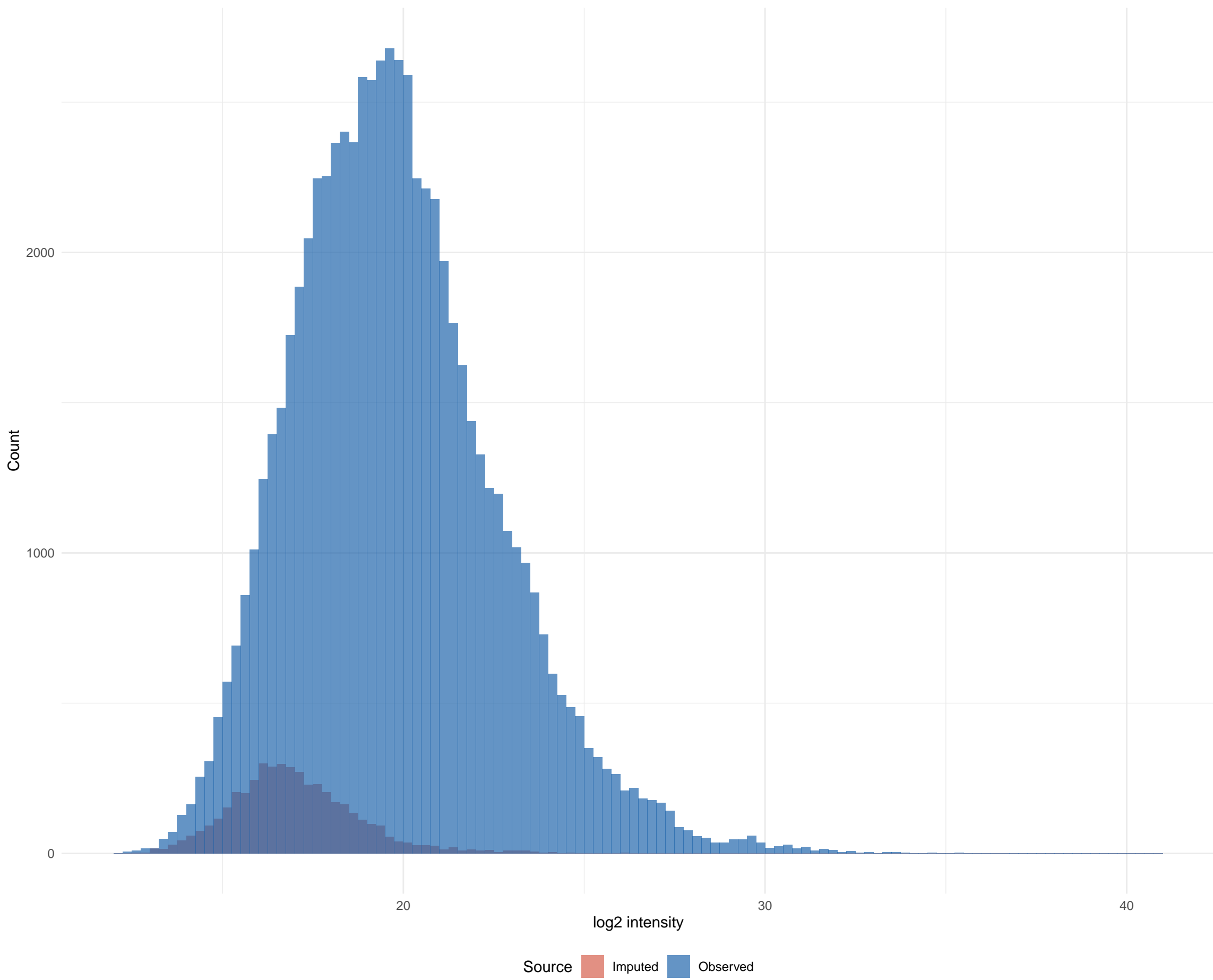A: Benchmark (best: bpca)
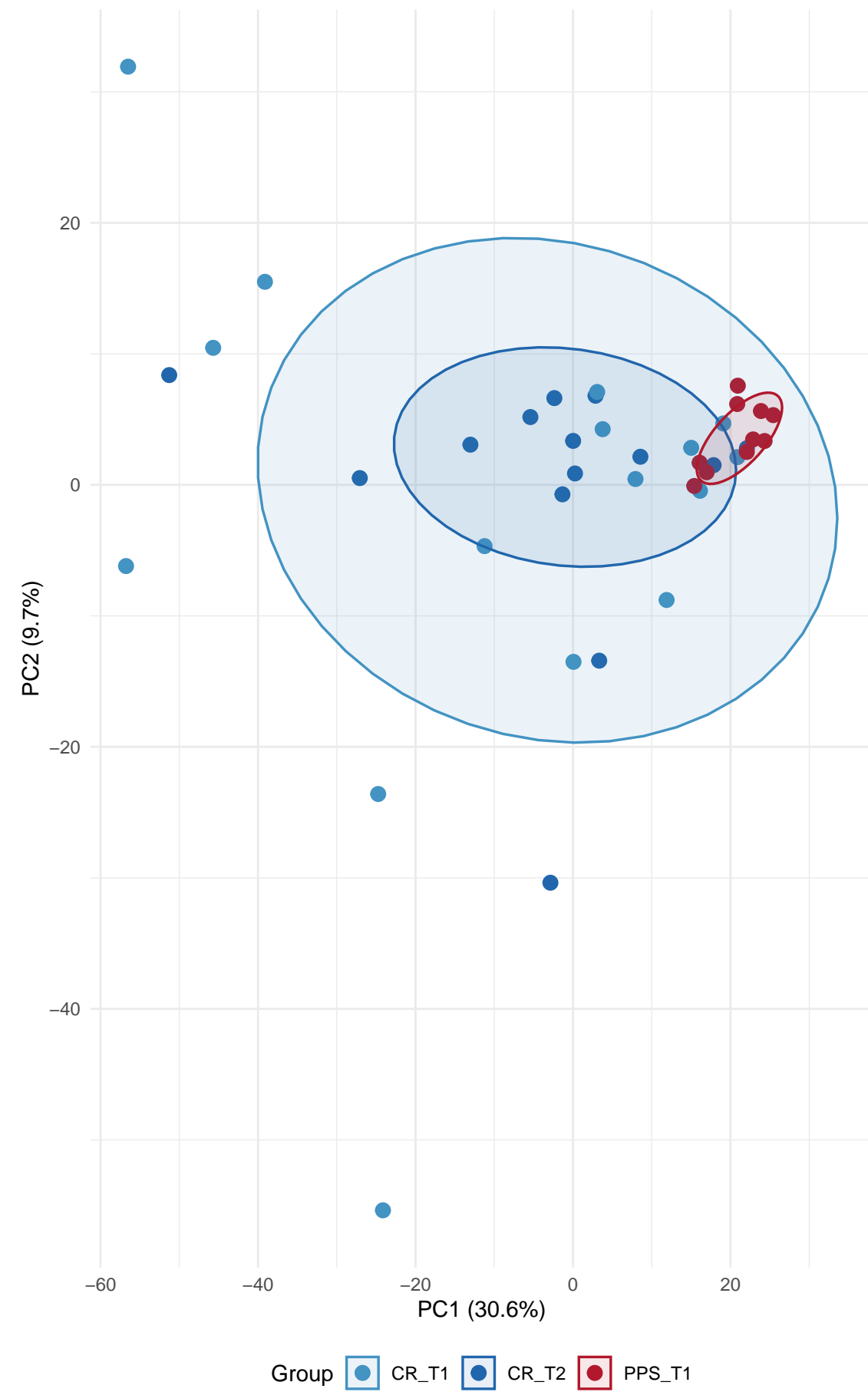
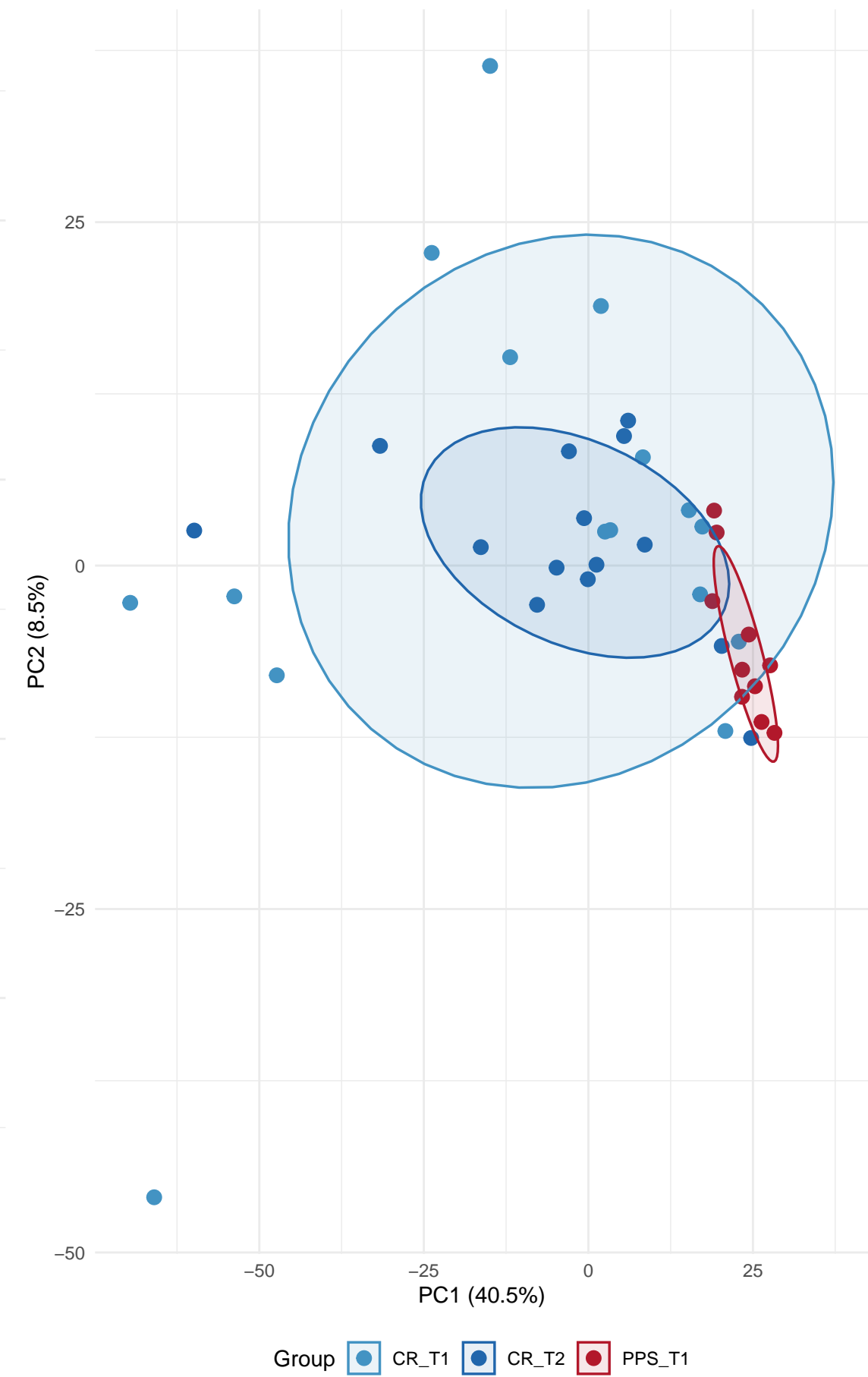B: Top 3 – bpca 0.1612 | RF 0.1747 | knn 0.2300

C: Intensity distribution – observed (n=68,680) vs imputed (n=4,480)

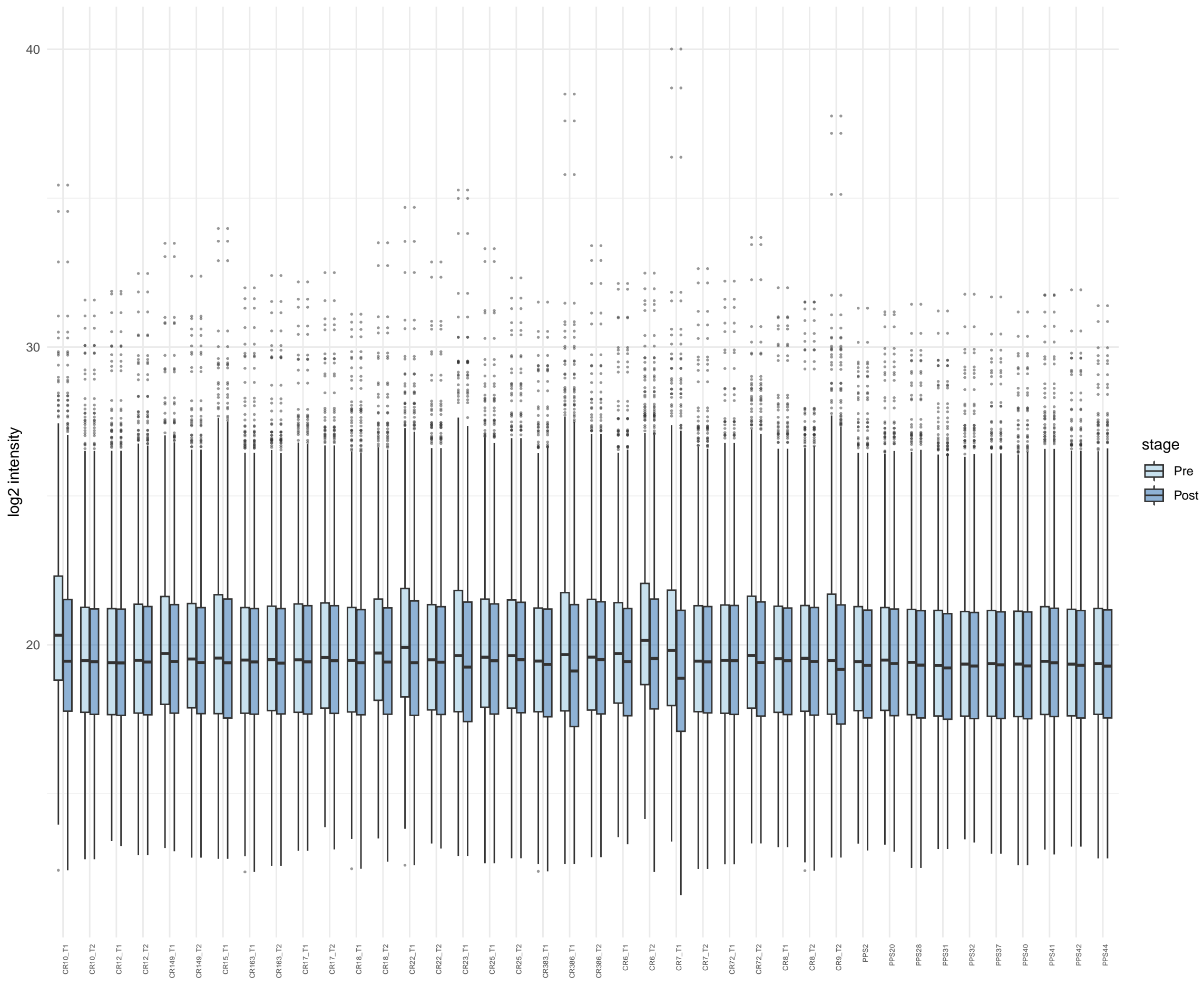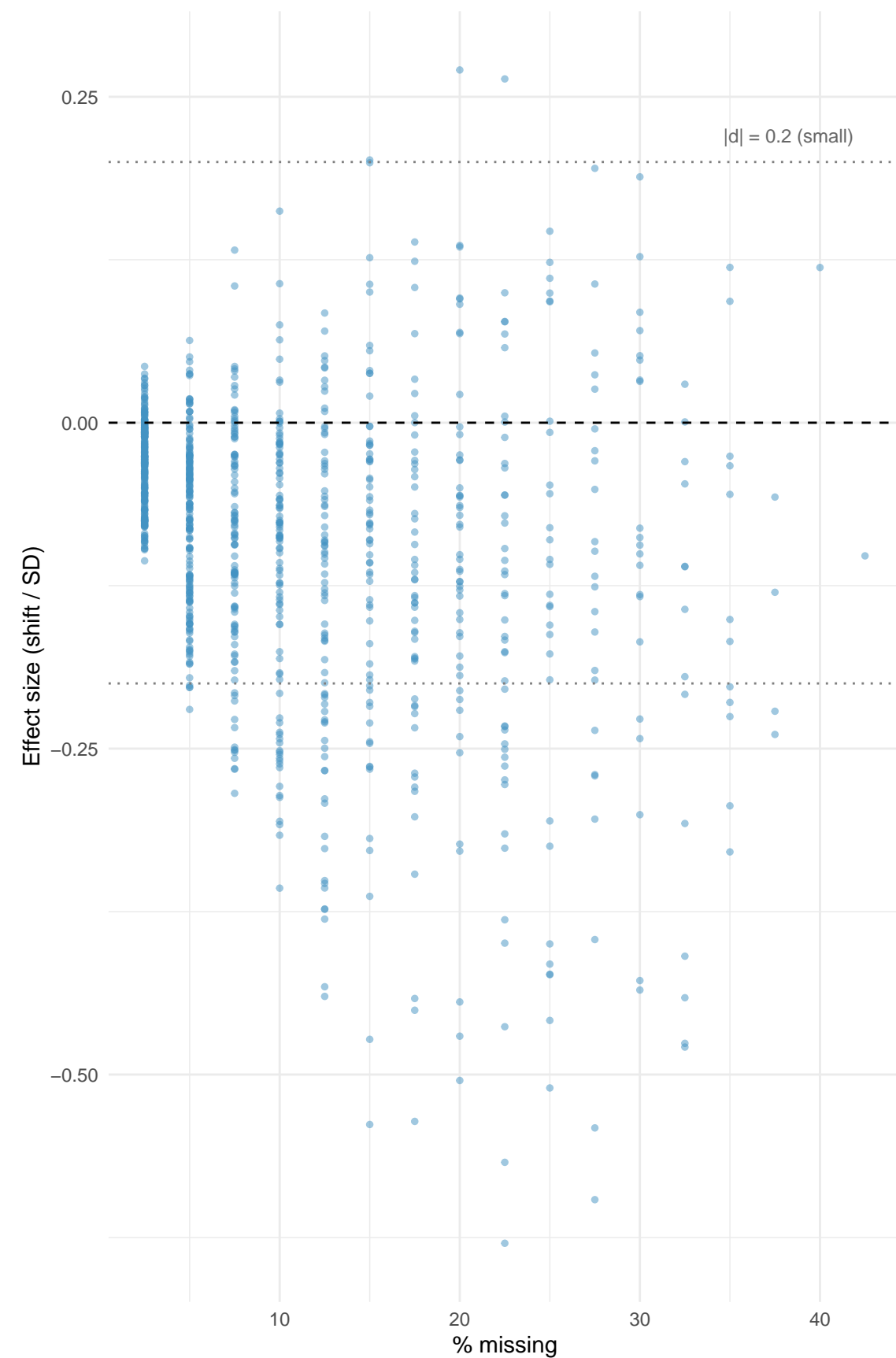D: PCA pre–imputation (normalized, outlier–removed)

E: PCA post–imputation (bpca)

Group ▢ CR_T1 ▢ CR_T2 ▢ PPS_T1

F: Per–sample log2 distributions (pre vs post imputation)

G: Imputation effect on protein means (Cohen's d)

H: Sample−level mean shift (identity line = no change)